

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)
Gene F. Young) Group Art Unit: 2616
Serial No.: 09/739,388) Examiner: Harper, Kevin C.
Filing Date: December 19, 2000) Confirmation No.: 3311
)
For: HIGH DENSITY SERVERLETS UTILIZING HIGH SPEED DATA BUS

REPLY BRIEF

To: Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

This Reply Brief is respectfully submitted in response to the Examiner's Answer mailed April 20, 2007.

STATUS OF CLAIMS

Claims 1-31 remain pending. Claims 1-31 stand rejected under 35 U.S.C. §103(a) over Chow et al. (US Patent No. 6,148,349, referred to hereinafter as “Chow”) in combination with other references as detailed in the Appeal Brief and the outstanding Office Action. Appellant traverses these rejections. In the interest of brevity, arguments set forth in the Appeal Brief will not be repeated in this document. Nonetheless, these arguments are incorporated herein.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether the rejected claims are unpatentable under 35 USC §103 over Chow in combination with other references as detailed in the Appeal Brief and the Final Office Action.

ARGUMENT

A. Examiner Fails to Establish a *prima facie* Case of Obviousness

Initially, as detailed in the Appeal Brief, the Examiner has failed to establish a *prima facie* case of obviousness. In particular, the Examiner must establish that all limitations recited in the claim are disclosed or suggested by the cited reference. See, e.g., MPEP 2143.03.

Applicant respectfully asserts that the Examiner has failed to establish a *prima facie* case of obviousness, in part, because Chow (alone or in combination of the other cited references) fails to disclose (or even to suggest) the claimed combination of features recited in the pending claims. In the interest of brevity, arguments set forth in the Appeal Brief will not be repeated in this document. Nonetheless, these arguments are incorporated herein.

B. Examiner's Answer Includes an Incomplete Citing of Legal Authority Regarding the Teaching Combination of the Cited Art

In pertinent part, on pages 10-11 of the Examiner's Answer, the Examiner states that:

However, in response to applicant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Appellant respectfully disagrees with Examiner's characterization of the state of case law. In particular, the above cited language appears to be verbatim out of MPEP §2145 III. However, the Answer fails to include the last remaining sentence of the aforementioned section which states that:

However, the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. See MPEP §2143.01.

As detailed in MPEP §2143.01 VI, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

It is respectfully submitted that the combination proposed by the Examiner would at least change the principle of operation of the cited prior art, namely, the Examiner's proposed modification of Chow in view of Matsunami et al. (US Patent No. 6,542,961, hereinafter referred to as "Matsunami").

In particular, as detailed in the Appeal Brief (and not reproduced entirely herein for brevity), Appellant disagrees that it would have been obvious to modify Chow with the switches of Matsunami as proposed by the Examiner. In Chow, hosts 102 access storage via a BYNET

Interconnect fabric 106. In Matsunami, hosts 30 access storage via diskarray switches 20. In other words, hosts 102 of Chow appear to perform similar functions as the hosts 30 in Matsunami; namely initiating storage requests and processing the results. Also, both the BYNET fabric 106 and the diskarray switches 20 appear to perform similar functions; namely, providing the hosts 102,130 with access to different storage components.

However, the Examiner's proposed combination mixes and matches these components in a way that would not be obvious to one of skill in the art. In particular, the Examiner proposes interposing the diskarray switch 20 of Matsunami in between the 110 nodes 212,214 and JBODs 222,218 of Chow. In this combination, the diskarrays 20 of Matsunami are no longer coupled to hosts, ignoring the function played by the diskarray in Matsunami. Thus, the Examiner's proposed combination of Chow and Matsunami would change the principle of operation of the cited prior art, violating the state of laws in force.

Furthermore, the Examiner's proposed combination adds an additional stage to the task of servicing requests. That is, in the proposed combination, after finally traversing the BYNET fabric, a request in Chow runs into yet another switching stage (the Examiner proposed intermediate diskarray from Matsunami). In addition to further delay and additional logic, the proposed architecture is seemingly unnecessary, as in Chow, scalability appears to be provided by the BYNET fabrics 106. That is, providing additional resources consistent with Chow, is simply a matter of attaching more nodes and JBODs 222,224 to one of the fabrics. Hence, one of ordinary skill in the art would not see any need for the Examiner's intermediate diskarray.

Also, as described in Matsunami, the Diskarray switch features a crossbar switch. The Examiner proposes using the crossbar switch in the proposed combination to create a path connecting a JBOD to IONS. During the period of time a path is made between a JBOD and an

ION, due to the conventional blocking nature of a crossbar switch, the other ION is excluded from accessing the particular JBOD. In support of this, Chow emphasizes that "at any given time both IONS 212 and 214 in a dipole 226 must be able to access all devices" (col. 8, lines 63-67). Chow appears to achieve this continuous access by providing each ION with direct dedicated connections with each JBOD (see FIG. 1 of Chow). The use of Matsunami's crossbar switch would undermine this aspect of Chow. That is, the IONS would not be able to access all devices at any given time. Instead the use of a crossbar switch would force a given ION to wait to access a JBOD until the needed path through the crossbar switch was available. Accordingly, one of ordinary skill in the art would not see any need for the Examiner's proposed use of the crossbar switch.

Thus, for at least the reasons above, Applicant disagrees that one of skill in the art would combine Chow and Matsunami in the manner proposed by the Examiner. These arguments equally apply to all pending rejections that rely on the combination of Chow and Matsunami. Combinations of Chow with references other than Matsunami are respectfully traversed as detailed in the Appeal Brief.

Accordingly, the rejection of pending claims is improper for reasons stated herein and in the Appeal Brief.

CONCLUSION

The Examiner's Answer fails to provide an evidentiary record sufficient to support an obviousness rejection of claims 1-31 under 35 U.S.C. §103. Therefore, Appellants urge the Board to reverse the examiner's rejections under 35 U.S.C. §103 of claims 1-31.

Respectfully submitted,

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